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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/936,632 | 02/21/2002 | Stemen Roelof Van Der Heide | 30394-1057 | 7250 |

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PEACOCK MYERS AND ADAMS P C
P O BOX 26927
ALBUQUERQUE, NM 871256927

EXAMINER

JACKSON, ANDRE K

ART UNIT PAPER NUMBER

2856

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/936,632

Applicant(s)

HEIDE ET AL.

Examiner

André K. Jackson

Art Unit

2856

✓

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Examiner's Amendment*.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Lund.

Regarding claim 1, Moreau et al. discloses a "Multi-element ultrasonic probe for electronic scanning" which discloses a cable (10), a measuring head (4), a device to process measuring data (20) and a reel (15) for winding the cable on and off. Moreau et al. does not disclose a reel for winding the cable on and off behind the measuring head at its distal end. However, Lund discloses in a "System for the internal inspection of pipelines" a reel for winding the cable on and off behind the measuring head at its distal end (Figure 1, 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moreau et al. to include a reel for winding the cable on and off behind the measuring head at its distal end as taught by Lund. By adding this feature the apparatus would be able to maintain coupling of

the fiber to the measuring head since the fiber would remain stable between the measuring head and the reel.

Regarding claim 2, Moreau et al. does not disclose a cable that is a glass fiber and a feed device for feeding the measuring head. However, Lund discloses a cable that is a glass fiber (5) and a feed device for feeding the measuring head (Figure 1, 4). Therefore, it would have been obvious to modify Moreau et al. to include a cable that is a glass fiber and a feed device for feeding the measuring head as taught by Lund since using optical fiber makes the apparatus lighter and the feed device is needed to provide energy to the measuring head.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Murakami et al.

Regarding claim 1, Moreau et al. discloses a cable (10), a measuring head (4), a device to process measuring data (20) and a reel (15) for winding the cable on and off. Moreau et al. does not disclose a reel for winding the cable on and off behind the measuring head at its distal end. However, Murakami et al. discloses in a "Self-propelled mobile pipeline inspection apparatus and method for inspecting pipelines" a reel for winding the cable on and off behind the measuring head at its distal end (Figure 8, 106). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moreau et al. to include a reel for winding the cable on and off behind the

measuring head at its distal end as taught by Murakami et al. By adding this feature the apparatus would be able to maintain coupling of the fiber to the measuring head since the fiber would remain stable between the measuring head and the reel.

Regarding claim 2, Moreau et al. does not disclose a cable that is a glass fiber and a feed device for feeding the measuring head. However, Murakami et al. disclose a cable that is a glass fiber (108) and a feed device for feeding the measuring head (106). Therefore, it would have been obvious to modify Moreau et al. to include a cable that is a glass fiber and a feed device for feeding the measuring head as taught by Murakami et al. since using optical fiber makes the apparatus lighter and the feed device is needed to provide energy to the measuring head.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Lund as applied to claim 1 above and in further view of Zollinger et al.

Regarding claim 3, neither Moreau et al. nor Lund discloses where the measuring head, the feed device and other electronics are incorporated individually in carrier members (Figure 10). What is not disclosed is a reel incorporated in a carrier member. However, Zollinger et al. discloses an "Apparatus for inspecting piping" which has a reel (spool, 38) incorporated in a carrier member. Therefore, it would have been obvious to the skilled artisan to modify Moreau et al. to include a reel

incorporated in a carrier member as taught by Zollinger since it would make the invention more compact.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Murakami et al. as applied to claim 1 above and in further view of Zollinger et al.

Regarding claim 3, neither Moreau et al. nor Murakami et al. discloses where the measuring head, the feed device and other electronics are incorporated individually in carrier members (Figure 10). What is not disclosed is a reel incorporated in a carrier member. However, Zollinger et al. discloses an "Apparatus for inspecting piping" which has a reel (spool, 38) incorporated in a carrier member. Therefore, it would have been obvious to the skilled artisan to modify Moreau et al. to include a reel incorporated in a carrier member as taught by Zollinger since it would make the invention more compact.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Lund and Zollinger et al. as applied to claim 3 above, and further in view of Marvin et al.

Regarding claim 4, Moreau et al. does not explicitly state that the couplings are flexible. However, it is inherent that the couplings be made to be flexible in order to move through curve pipes. Moreau et al. does not explicitly state that the couplings are flexible. Marvin et al. discloses where the individual carrier members are sequentially interconnected by

flexible couplings (24,26,28,30 and 32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Moreau et al. to include where the individual carrier members are sequentially interconnected by flexible couplings as taught by Marvin et al. since couplings need to be made to be flexible in order to move through curve pipes.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Murakami et al. and Zollinger et al. as applied to claim 3 above, and further in view of Marvin et al.

Regarding claim 4, Moreau et al. does not explicitly state that the couplings are flexible. However, it is inherent that the couplings be made to be flexible in order to move through curve pipes. Moreau et al. does not explicitly state that the couplings are flexible. Marvin et al. discloses where the individual carrier members are sequentially interconnected by flexible couplings (24,26,28,30 and 32). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Moreau et al. to include where the individual carrier members are sequentially interconnected by flexible couplings as taught by Marvin et al. since couplings need to be made to be flexible in order to move through curve pipes.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Lund, Zollinger et al. and Marvin et al. as applied to claim 4 above, and further in view of Wernicke.

Regarding claim 5, Moreau et al. does not disclose where the flexible couplings are formed by hydraulic tubes with a steel covering. However, Wernicke discloses a "Spiral tractor apparatus and method" which has flexible couplings formed by hydraulic tubes with a steel covering. Therefore, it would have been obvious to one of ordinary skill in the art to modify Moreau et al. to include flexible couplings formed by hydraulic tubes with a steel covering as taught by Wernicke since steel provides a durable structure.

Regarding claim 6, it is inherent that the length of the tubes are chosen because of its flexural stiffness in order to proceed through the pipes without getting stuck and the ability to move through the pipes with ease.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau et al. in view of Murakami et al., Zollinger et al. and Marvin et al. as applied to claim 4 above, and further in view of Wernicke.

Regarding claim 5, Moreau et al. does not disclose where the flexible couplings are formed by hydraulic tubes with a steel covering. However, Wernicke discloses a "Spiral tractor apparatus and method" which has flexible couplings formed by hydraulic tubes with a steel

Art Unit: 2856

covering. Therefore, it would have been obvious to one of ordinary skill in the art to modify Moreau et al. to include flexible couplings formed by hydraulic tubes with a steel covering as taught by Wernicke since steel provides a durable structure.

Regarding claim 6, it is inherent that the length of the tubes are chosen because of its flexural stiffness in order to proceed through the pipes without getting stuck and the ability to move through the pipes with ease.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to André K. Jackson whose telephone number is (703) 305-1522. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

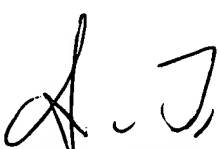
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Application/Control Number: 09/936,632

Page 9

Art Unit: 2856

A.J. 
September 3, 2003


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey D. Myers on 08/21/03.

The application has been amended as follows:

On page 3, line 33 change "near" to --at--.

The change was made to keep the consistency between the claim, the abstract and the specification.